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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,499	11/28/2000	Frank Van Heeswyk	2664.18	5572
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KATTEN MUCHIN ZAVIS ROSENMAN 525 WEST MONROE STREET CHICAGO, IL 60661-3693			MUNOZ, GUILLERMO	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/722,499

Applicant(s)

HEESWYK ET AL.

Examiner

Guillermo Munoz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks, filed November 17, 2004, with respect to the rejection(s) of claim(s) 1 and 11-14 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rikkinen et al..

Claim Status

Claims 1-12 and 14 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6-7, 9-12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Rikkinen et al..

Regarding claim 1; Rikkinen et al. disclose a Method for Radio Resource Control which teach almost all the claimed subject matter in claim 1 as follows.

Rikkinen et al. teach:

“an uplink channel structure for said plurality of subscriber stations to communicate with said base station” (The uplink channel structure is shown in Figures 4B, 5B, 6B, & 7B-9. The plurality of subscriber stations are shown as elements 13 of Figure 1.);

“including a plurality of dedicated channels” (The phrase “to create or remove dedicated channels 100 as needed” page 6 line 28, infers dedicated channels are equal to allocated Physical channel resources for the communication of information between base station and mobile stations. Rikkinen et al.’s allocable base station resources are illustrated in Figures 2A, 2B, and 3.);

“including...an uplink part of at least one bi-directional user control channel” (“bi-directional is intended to encompass any suitable method of associating an uplink channel with a downlink channel to enable two way communications between a subscriber station and a base station...two channels are refereed to as a bi-directional channel” page 6, lines 10-16 of instant application. Rikkinen et al. clearly indicates Base station resources allocated for enabling two way communications between a subscriber station and a base station in Figures 4B, 5B, 6B, & 7B-9. Rikkinen et al. further teach slots labeled as C in figure 3 for the transmission of control information.);

“a downlink channel structure” (The downlink channel structure is shown in Figures 4B, 5B, 6B, & 7B-9.);

“including a plurality of dedicated channels” (The phrase “to create or remove dedicated channels 100 as needed” page 6 line 28 of instant application, infers dedicated channels are equal to allocated Physical resources. Rikkinen et al.’s allocable base station resources are illustrated in Figures 2A, 2B, and 3.);

“including...a downlink part of said at least one bi-directional user control channel” (“bi-directional is intended to encompass any suitable method of associating an uplink channel with a downlink channel to enable two way communications between a subscriber station and a base

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station...two channels are referred to as a bi-directional channel” page 6, lines 10-16 of the instant application. Rikkinen et al. clearly indicates Base station resources allocated for enabling two way communications between a subscriber station and a base station in Figures 4B, 5B, 6B, & 7B-9.);

“at least one bi-directional user control channel transmits data in frames divided into slots” (Rikkinen et al.’s data in frames divided into slots is illustrated in Figure 3 as slots labeled I, wherein I means information.);

“each subscriber station employing said at least one bi-directional user control channel” (The phrase “no user control channel need be available to a subscriber station 28 with a dedicated channel 100 assigned to it” in page 6 lines 3-4, infers that each subscriber station employs at least one bi-directional user control channel as needed. Rikkinen et al. illustrates the operation of *bi-directional* user control channels on an as needed basis in Figures 4B, 5B, 6B, & 7B-9.);

“at least one bi-directional user control channel being allocated at least a portion of a slot in said frames” (The phrase “a portion of a slot” is interpreted to mean all or some of a slot. Rikkinen et al. Illustrates both all and some of a slot being used for communicating control information between a base station and a mobile station in Figure 3 and Figures 4B, 5B, 6B, & 7B-9.)

Regarding claim 2; Rikkinen et al. further teach the claimed subject matter,

“at least one subscriber station is allocated a slot in said frames” (Rikkinen et al.’s method for radio resource control is for allocating slots in a frame structure to communicate with mobile stations.)

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Regarding claim 3; Rikkinen et al. further teach the claimed subject matter

“at least one subscriber station is allocated at least two slots in said frames” (Rikkinen et al. teach the allocation of resources to terminals based on the capacity requested in col. 4 lines 1-10.)

Regarding claim 4; Rikkinen et al. further teach the claimed subject matter,

“two subscriber stations share a slot in said frame” (Rikkinen et al. clearly indicates subdividing a frame time slot into subsections for allocation to mobile stations in Figure 2A.)

Regarding claim 6; Rikkinen et al. further teach the claimed subject matter,

“at least one slot in said frame is deemed a random access slot” (Rikkinen et al. teach the preferred embodiment of the invention contains random access slots in col. 3 lines 65-66.);

“for use by two or more selected subscriber stations *via* a random access protocol” (Rikkinen et al. teach the mobile *stations* use the random access slots to send capacity requests in col. 3 line 66- col. 4 line 1. Rikkinen et al. do not mention the random access protocol, however, it is inherent to the operation of random access slots.)

Regarding claim 7; Rikkinen et al. further teach the claimed subject matter,

“power control information is transmitted *via* said at least one bi-directional user control channel” (Rikkinen et al. teach the transmission of power control information in col. 7 lines 10-17.)

Regarding claim 9; Rikkinen et al. further teach the claimed subject matter,

“downlink channel structure further includes a broadcast packet data channel” (Rikkinen et al. teach the transmission of a Packet Paging channel in col. 11 lines 3-7.);

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“wherein acknowledgements for receipt of a packet from said broadcast packet data channel are transmitted from a receiving subscriber station to said base station *via* said at least one bi-directional user control channel” (Rikkinen et al. teach the acknowledgement from the mobile station is transmitted in a Packet Paging Acknowledgement channel in col. 11 lines 11-14.)

Regarding claim 10; Rikkinen et al. further teach the claimed subject matter,

“subscriber station de-allocates said portion of a slot in said at least one bi-directional user control channel” (The term de-allocates is interpreted to mean informing the base station in the event of a decrease in required capacity. Rikkinen et al. teach the mobile station informing the base station of a decrease in required capacity in col. 10 lines 25-27.);

“when a dedicated channel is allocated to said subscriber station” (The dedicated channel allocation is necessary for the operation of decreasing the allocation of dedicated channels or physical channel resources of the base station.)

Regarding claim 11; Rikkinen et al. further teach the claimed subject matter,

“a plurality of dedicated channels dynamically allocable for said plurality of subscriber stations to communicate with said base station” (The phrase “to create or remove dedicated channels 100 as needed” page 6 line 28, infers dedicated channels are equal to allocated Physical channel resources for the communication of information between base station and mobile stations. Rikkinen et al.’s allocable base station resources are illustrated in Figures 2A, 2B, and 3.);

“at least one bi-directional user control channel” (“bi-directional is intended to encompass any suitable method of associating an uplink channel with a downlink channel to

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enable two way communications between a subscriber station and a base station...two channels are referred to as a bi-directional channel” page 6, lines 10-16 of instant application. Rikkinen et al. clearly indicates Base station resources allocated for enabling two way communications between a subscriber station and a base station in Figures 4B, 5B, 6B, & 7B-9. Rikkinen et al. further teach slots labeled as C in figure 3 for the transmission of control information.);

“for communicating between said base station and those of said subscriber stations to which no dedicated channel is allocated” (Rikkinen et al. teach the allocation of resources to terminals based on the capacity requested in col. 4 lines 1-10.);

“wherein said at least one bi-directional user control channel is shared among said subscriber stations” (Rikkinen et al. teach the preferred embodiment of the invention contains random access slots in col. 3 lines 65-66.);

“to which no dedicated channel is allocated” (Rikkinen et al.’s method for radio resource control is for allocating slots in a frame structure to communicate with mobile stations.)

Regarding claim 12; Rikkinen et al. further teach the claimed subject matter,

“said dedicated channels are bi-directional” (“bi-directional is intended to encompass any suitable method of associating an uplink channel with a downlink channel to enable two way communications between a subscriber station and a base station...two channels are referred to as a bi-directional channel” page 6, lines 10-16 of instant application. Rikkinen et al. clearly indicates Base station resources allocated for enabling two way communications between a subscriber station and a base station in Figures 4B, 5B, 6B, & 7B-9. Rikkinen et al. further teach slots labeled as I in figure 3 for the transmission of data information.);

Regarding claim 14; Rikkinen et al. further teach the claimed subject matter,

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“said system further includes at least one shared data channel” (The term “shared” is interpreted to mean able to be assigned to any station within the system, i.e. part of a collective pool of physical channel resources of the base station. Rikkinen et al. illustrate the shared allocable base station resources in Figures 2A, 2B, and 3.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rikkinen et al..

Regarding claim 5; as applied to claim 1 above, Rikkinen et al. teach a dynamic slot allocation system, wherein slots are allocated on a frame-by-frame basis. In the event that a given slot is released for use by one user, that slot may be assigned for use by another user in the following frame.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to characterize Rikkinen et al.’s allocation system as having two mobile stations alternately employing a slot in successive frames.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rikkinen et al..

Rikkinen et al. discloses substantially the claimed invention as set forth in the discussion above for claim 1.

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Rikkinen et al. does not disclose expressly firmware upgrades are transmitted via bi-directional user control channels.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to transmit firmware upgrades via the bi-directional control channels.

Applicant has not disclosed that the transmitting of firmware upgrades in bi-directional control channels provides an advantage, is used for a particular purpose or solves a stated problem.

One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either power control information taught by Rikkinen et al. or firmware upgrade information because both forms of information perform the same function of upgrading the operation of the user system.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Rikkinen et al.'s control information with firmware upgrade information to obtain the invention as specified in claim 8.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045.

The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GM
March 2, 2005



JEAN B. CORRIELUS
PRIMARY EXAMINER

5/3/05